SECTION 8

Clutch

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PART B

8B SPLIT TORQUE CLUTCH

Part B

Split torque Clutch

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8B. 1Specification:

Clutch diameter - primary plate	...	12 inch (305 mm)
Clutch disc thickness - primary plate	...	0.362 inch (9.22 mm)
Clutch disc thickness - wear tolerance	...	0.098 inch (2.50 mm)
Release lever height - 12 inch (305 mm) clutch	...	3.24 - 3.25 inch (82.31-82.55 mm).
No.of springs	...	6 springs for MF 2605.
	...	9 springs for MF 2615.

Special Tools:

SER / 011	...	Clutch centraliser.
SER / 006	...	Lever height setting gauge.

Bolt Torques:

Clutch cover to flywheel (305 mm)	...	22 lbf.ft (30 Nm)
Flywheel to engine	...	74 lbf.ft (100 Nm)
PTO drive plate to clutch cover	...	27 lbf.ft (37 Nm)

8B.2GENERAL DESCRIPTION:

Split-torque Clutch - 305 mm:

The split torque clutch differs from the dual clutch in that the drive to the Ferguson linkage pump and Power Take- Off (PTO) is taken from the clutch cover and is always engaged when the engine is running. The clutch is therefore fitted to tractors with Independent Power Take- Off (IPTO) which employs a separate hydraulic clutch to engage or disengage the PTO.

The drive to the gearbox and rear wheels is transmitted from either a 305 mm driven plate.The friction disc (10) is operated by the pressure plate (9) against the flywheel. Pressure plate movement is obtained by three release levers (5), pivoted on the clutch cover plate (13). Release lever movement operating against the Nine coil springs (12) moves the pressure plate (9) rearwards and releases the friction disc (10). The clutch release levers (5) are operated by a release bearing (15) which is moved by the clutch pedal.

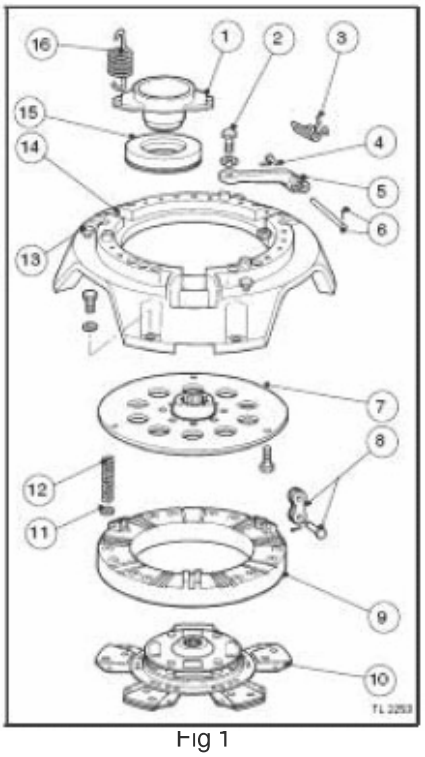

Fig 1

1. Carrier
2. Screw
3. Spring
4. Retaining clip
5. Lever
6. Pin
7. PTO plate
8. Link
9. Pressure plate
10. Fricition disc
11. Washer
12. Springs
13. Cover plate
14. Bolt
15. Bearing
16. Spring

8B.3 SPLIT-TORQUE CLUTCH ASSEMBLY

Removal and Refitment

Special Tools:

SER / 011 Clutch centraliser

SER / 006 Lever height setting gauge

WARNING:The following sequence of instructions must be followed carefully, as spring pressure will cause the clutch cover to fly apart if pressure is not released slowly and evenly.

Removal

1. Split the tractor between the engine and the gearbox .
2. Fit three slave bolts 1/4 UNC x 2 1/8 inch long to the three equally-spaced holes in the clutch cover.
3. Progressively slacken and remove the six bolts and washers.
4. Lift the clutch assembly clear of the flywheel. The main friction disc will remain separate from clutch assembly.

WARNING: Use a face mask when cleaning the clutch and housing. DO NOT USE COMPRESSED AIR.

Refitment

5. Lightly smear the splines of the friction disc with one of the greases recommended in the specifications in section 8A.1.
6. Locate the main friction disc in the flywheel.
7. Position the clutch assembly onto the flywheel.
8. Using SER / 011, centralise the clutch assembly and the friction disc.
9. Refit the six bolts and washers. Torque to 22 lbf.ft (30 Nm).
10. Remove the three slave bolts and then remove SER / 011.
11. Using tool number SER / 006 lever height setting gauge, check the adjustment of each release lever. The domed end of the release lever setscrew must be just touching the gauge. Adjust the setscrews as required and re-tighten the locknuts.
12. Reassemble the tractor.
13. Adjust the clutch pedal free travel, see operation 8A.3

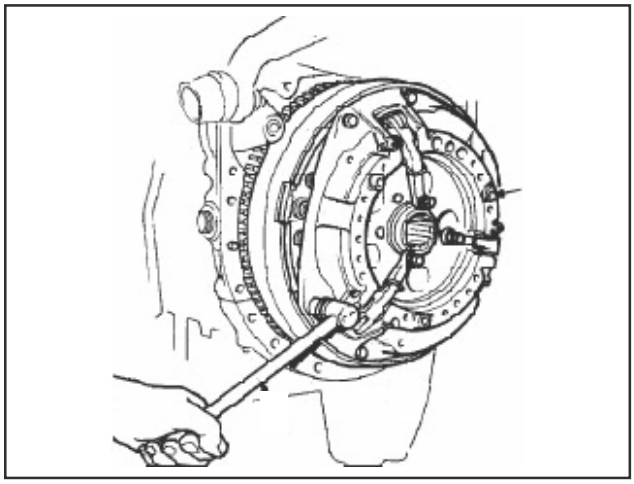

Fig 2

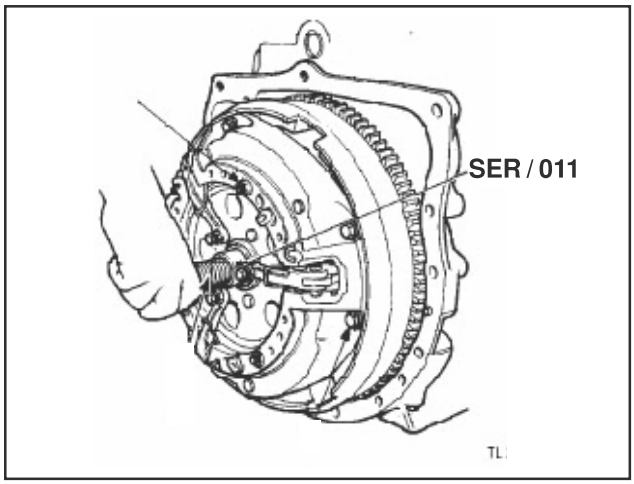

Fig 3

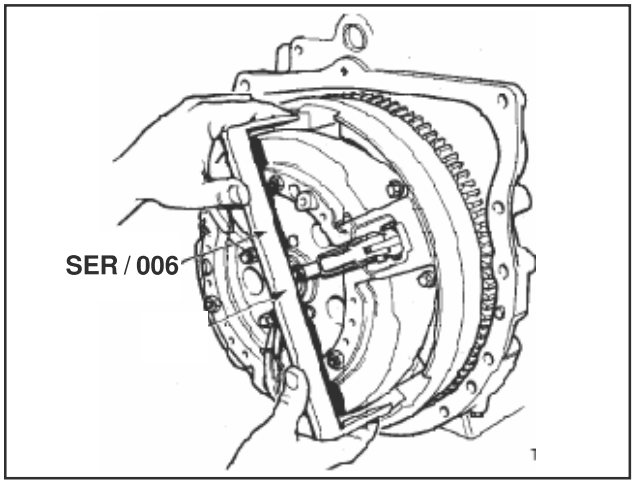

Fig 4

8B. 4 SPLIT-TORQUE CLUTCH :

Overhaul

Specia Tools:

SER / 011 Clutch centraliser

SER / 006 Lever height setting gauge Hydraulic press.

Dis-assembly

1. Remove the clutch assembly, see operation 8B.2
2. Place the clutch assembly on the hydraulic press and locate a suitable bar across the top of the clutch cover.

WARNING: Ensure that the clutch is located under the press correctly, that the bar will not slip and that the press has sufficient travel to allow the spring pressure to come off. Release the pressure evenly and slowly.

3. Apply pressure until the three 1/4 inch slave bolts can be easily removed.
4. Removing the retaining clips from the pivot pins.
5. Remove the pivot pins.
6. Remove the lever springs.
7. Disconnect the release levers from the links.
8. Slowly release the pressure from the press until the springs are out of compression.
9. Lift off the cover plate assembly.
10. Remove the springs and the fiber washers.
11. Remove the links.
12. Remove the three bolts and nuts.
13. Remove the PTO plate.

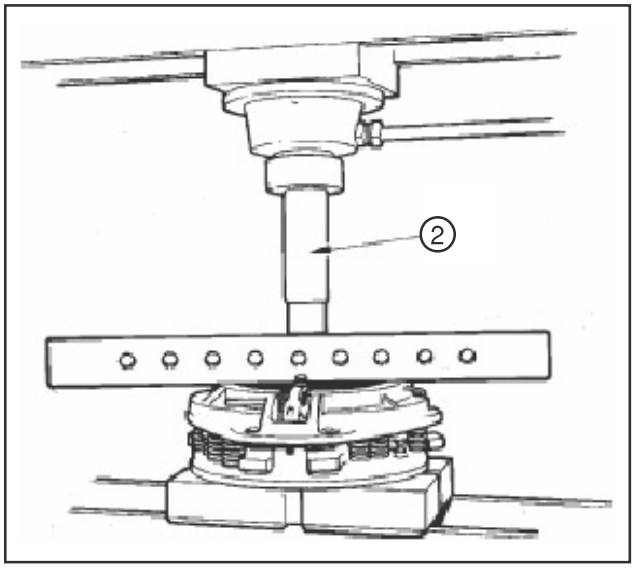

Fig 5

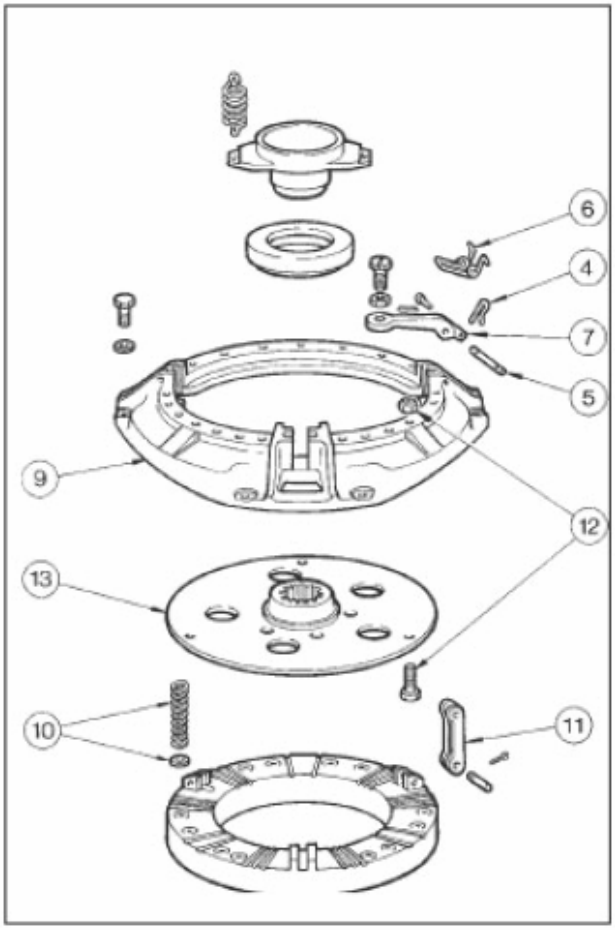

Fig 6

Examination

Inspect all components for wear, scoring, cracks, distortion or signs of overheating.

If the tractor flywheel is scored, skimming is possible, in 0.010 inch (0.254 mm) increments up to a maximum of 0.0393 inch (1.00 mm).

The ledge to which the clutch cover is bolted must be skimmed by the same amount to maintain the distance from the clutch face of 1.564 to 1.559 inch (39.75 to 39.62 mm) - see fig 7

NOTE: *Never, under any circumstances, skim the pressure plate, as this will severely impair its heat dissipation characteristics.*

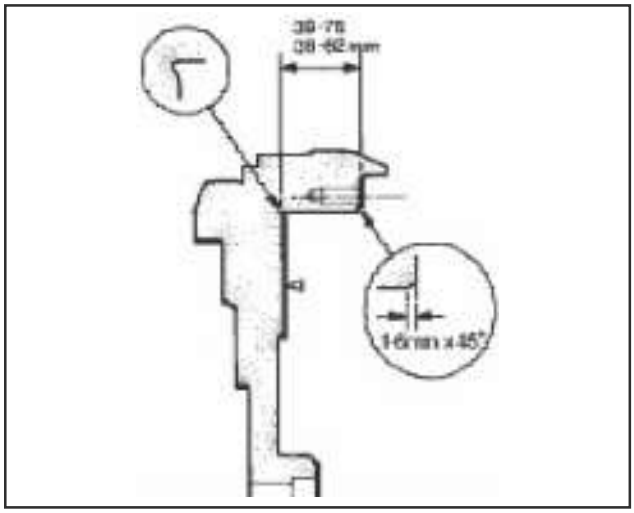

Fig 7

Re-assembly

14. Reverse procedures 1 to 13 except:

    (a) Fit nine new springs and fiber washers to the pressure plate in the positions shown in the illustration - see fig 8.

    (b) Refit the PTO plate (13) and torque the bolts to 27 lbf.ft (37 Nm).

Model	Number of springs	color	Illustration
MF 2605 (2WD and 4WD)	6	Post office Red	A
MF 2615 (2WD and 4WD)	9	Post office Red	B

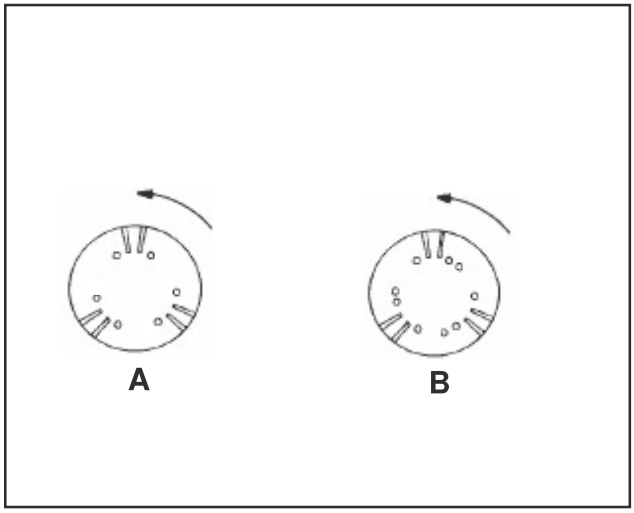

Fig 8

8B . 5 FLYWHEEL PILOT BEARING

Removal and Refitment

Removal

1. Remove the clutch assembly, see 8B.2 or 8A.5
2. Remove the six bolts and washers.
3. Remove the flywheel.
4. Fill the pilot bearing bore with heavy grease, then insert a suitable length of 0.665 inch (16.9 mm) diameter rod into the pilot bearing bore. Tap the rod sharply to hydraulically eject the bearing.

Refitment

5. Fit a new pilot bearing.
6. Locate the flywheel, aligning the untapped hole in the flange to the unused hole in the flywheel.
7. Fit the flywheel bolts and washers then torque to 74 lbf.ft (100 Nm).
8. Refit the clutch.

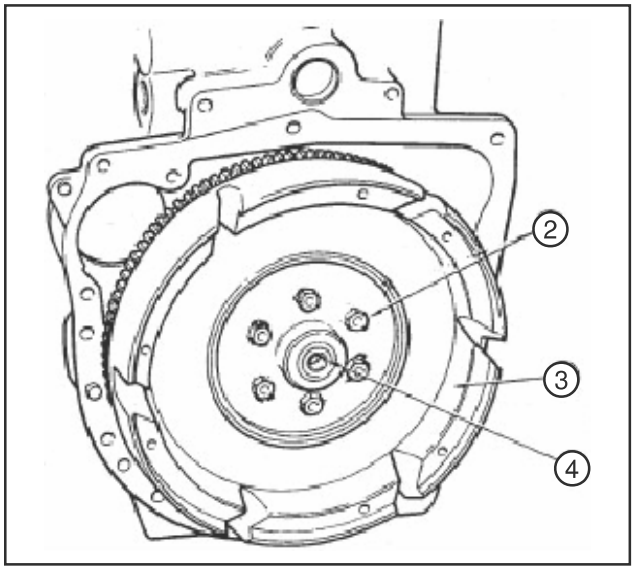

Fig 9